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EXAMINER	
STRANGE, AARON N	
ART UNIT	**PAPER NUMBER**
2153	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/685,851	**Applicant(s)** WINTER, ROBERT L.
	Examiner AARON STRANGE	**Art Unit** 2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Examiner would like to note that the present application has been reassigned to a new Examiner.

Response to Arguments

2. Applicant's arguments filed 6/24/08 have been fully considered but they are not persuasive.

3. With regard to claim 1, and Applicant's assertion that Kracht "does not teach that the first node transmits a first identification message addressed to an address, the identification message comprising only one frame" (Remarks 7), the Examiner respectfully disagrees. Kracht discloses a message that "includes a packet of information that contains both its IP address 206 and the logical name of the port that is used to send the message" (col. 2, ll. 47-50).

While there are some differences between packets and frames, those differences are not important in this case. One of ordinary skill in the art would have understood that an identification message containing a single packet would, in at least some embodiments, comprise a single frame. It is well known in the art that packets and frames often have a one-to-one relationship during data transmission.

Applicant's claims do not require that every message transmitted by the first node comprise "only one frame". The present claims merely require "a first identification message" to do so. At least some of the messages transmitted by Kracht, consisting of a single packet, would comprise "only one frame" when transmitted.

4. With further regard to claim 1, and Applicant's assertion that Kracht's message "contains multiple amounts of information which necessarily excludes the identification message comprising 'only one frame'" (Remarks 7), it is noted that Kracht's message contains *less* information than Applicant's own identification message. The specification of the present application describes the identification message as containing the IP address and port identifier in Kracht's message, *in addition to* a MAC address (Spec. 6).

Therefore, based on Applicant's own description of the identification message, the inclusion of "multiple amounts of information" in Kracht's message does not necessarily exclude the identification message from containing only one frame.

Claim Objections

5. Claim 18 objected to because of the following informalities: There appears to be a typographical error "a first message and first identification message" in line 5. Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 5, 7-11,14, 16-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kracht (US 6,377,987).

8. In regards to claim 1 Kracht discloses, a communications network, comprising:

a. a first node **(fig. 2A #202)** having a first port **(fig. 2A #214)**;

b. a second node **(fig. 2A #204)** having a second port **(fig. 2A #236)**, wherein the second port is connected to the first port by a communications link **(Col. 2 line(s) 57-58)**; wherein:

i. the first node transmit a first identification message from the first port **(fig. 2A)**, the identification message addressed to an address, the identification message comprising only one frame **(Col. 2 line(s) 47-50)**;

ii. the second node receives the identification message on the second port **(fig. 2A #236)**;

iii. the second node logs the identification information **(Col. 2 line(s) 50-53)**;

iv. and the second node delivers the identification information to an administrator **(network management system)**, the administrator operable to determine that the first node and the second node are physically connected **(Col. 2 line(s) 55-58)**.

9. In regards to claim 2 and 11 Kracht disclose wherein the address is a multicast address **(fig. 2A #206)**.

10. In regards to claims 5 and 14 Kracht discloses, wherein the identification information comprises an IP address **(Col. 2 line(s) 8-9)**.

11. In regards to claim 8 Kracht discloses, the first identification message further comprises characteristic information **(ex. IP address and logical name)** about the first node and the first port **(Col. 2 line(s) 47-50)**; the second identification messages further comprises characteristic information **(ex. what is connected on the second port (fig. 2A #220))** about the second node and the second port **(Col. 2 line(s) 55-58)**.

12. In regards to claim 9 Kracht discloses, the node is operable to receive a command **(Col. 2 line(s) 55, query command)**; the node, in response to the command, sends the identification information to an administrator **(Col. 2 line(s) 55-58)**.

13. In regards to claim 10 Kracht discloses, a method for determining a network topography **(Title)**, comprising the steps of:

c. transmitting from a first port **(fig. 2A #214)** on a first node **(fig. 2A #202)**, an identification message, the identification message comprising only one frame and containing identification information **(Col. 2 line(s) 47-50)**;

d. receiving on a second port **(fig. 2A #220)** of a second node **(fig. 2A #204)**, the identification message **(fig. 2A #214)**;

e. logging the identification information **(Col. 2 line(s) 50-53)**;

f. delivering the logged identification information to an administrator **(network management system) (Col. 2 line(s) 55-58)**;

g. determining a nearest neighbor for the first node, where the nearest neighbor has received an identification message from the first node, or the nearest neighbor has received an identification message from the first node **(Col. 2 line(s) 55-58)**.

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kracht (US 6,377,987) as applied to claims 1 and 10 above, and further in view of Snyder et al. (US 6,667,960).

17. In regards to claims 4 and 13 Kracht's does not teach, wherein the first message is sent responsive to a user command.

18. In the same field of endeavor Snyder et al. teach compute elements sending one frame, receiving, and storing information about each node on the network to discover the topology of the network **(Col. 4 line(s) 9-18)**. Likewise, the compute elements can query each port of the cross element A to identify which system components are connected **(Col. 5 line(s) 8-10)**, i.e. the first message being received is in a responsive to a user command.

19. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the prior art disclosed in Kracht's mechanism for determining actual physical topology of network based on gathered configuration information representing true neighboring devices with Snyder et al. teaching as discussed above to allow for the capability of having a system that allows the components to generate and maintain a functional and physical topology of system components.

20. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kracht (US 6,377,987) in view of Snyder et al. (US 6,667,960).

21. In regards to claim 18 Kracht discloses, an information handling system, comprising:

h. a first node **(fig. 2A #202)** having a first port **(fig. 2A #214)**,

i. the first node **(fig. 2A #202)** operable to be connected in a computer network comprising a second node **(fig. 2A)**, the second node **(fig. 2A #204)** having a second port link **(fig. 2A #220)**; wherein the first node **(fig. 2A #202)** is operable to:

v. transmit a first message a first identification message **(fig. 2A)**, the first identification messaged addressed to a first address, the first identification message comprising only one frame **(Col. 2 line(s) 47-50)**;

vi. and deliver the identification information to an administrator, the administrator operable to determine that the first node and the second node are physically connected.

22. Kracht do not teach receive a second message on the first port, the second message addressed to a second address, the second message comprising identification information about a second node in the communication network, the second node having a second port, the second message comprising only one frame; log the identification information;

23. In the same field of endeavor Snyder et al. teach compute elements sending one frame, receiving, and storing information about each node on the network to discover the topology of the network **(Col. 4 line(s) 9-18)**. Wherein the compute element **(fig. 1 #105)** receives a message on a first port **(Col. 4 line(s) 13-15, 45-50),** the message including identification information about the crossbar element A **(fig.1 # 120) (second node)**.

24. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the prior art disclosed in Kracht's mechanism for determining actual physical topology of network based on gathered configuration information representing true neighboring devices with Snyder et al. teaching as discussed above to allow for the capability of having a system that allows the components to generate and maintain a functional and physical topology of system components. Likewise, for a system in which components can exchange address information while minimizing costs in terms of software or hardware control components.

25. In regards to claim 19 Kracht discloses, wherein the identification information comprises an IP address **(Col. 2 line(s) 8-9)**.

26. In regards to claim 20 Kracht do not teach, wherein the administrator is operable to detect non-participating nodes in the network.

27. In the same field of endeavor Snyder et al. teach compute elements sending one frame, receiving, and storing information about each node on the network to discover the topology of the network **(Col. 4 line(s) 9-18)**. Likewise the compute elements are able to determine both functional and physical topology of the system, i.e. non-participating nodes in the network **(Col. 5 line(s) 57-58)**.

28. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the prior art disclosed in Kracht's mechanism for determining actual physical topology of network based on gathered configuration information representing true neighboring devices with Snyder et al. teaching as discussed above to allow for the capability of having a system that allows the components to generate and maintain a functional and physical topology of system components.

29. Claims 3, 6, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kracht (US 6,377,987) as applied to claims 1 and 10 above, and further in view of Gundavelli (US 6,795,403).

30. In regards to claims 3 and 12 Kracht's does not teach, wherein the node transmits the first message at an expiration of a delay.

31. In the same field of endeavor Gundavelli's teach discovering of switch devices in a network. Wherein the bridge protocol data (BPDUs) (messages) are transmitted at the end of 30 seconds **(Col. 3 line(s) 19-20)**.

32. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the prior art disclosed in Kracht's mechanism for determining actual physical topology of network based on gathered configuration information representing true neighboring devices with Gundavelli's teaching as discussed above to allow for the capability communicating information about what switches that are in the network periodically.

33. In regards to claims 6 and 15 Kracht's does not teach, wherein the identification information comprises a MAC address.

34. In the same field of endeavor Gundavelli's teach discovering of switch devices in a network. Wherein the information transmitted includes the MAC address **(Col. 50-56)**.

35. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the prior art disclosed in Kracht's mechanism for

determining actual physical topology of network based on gathered configuration information representing true neighboring devices with Gundavelli's teaching as discussed above to allow for the capability of determining the forwarding device.

Conclusion

36. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

37. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON STRANGE whose telephone number is (571)272-3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Glenton B. Burgess/
Supervisory Patent Examiner, Art Unit 2153

/A. S./
Examiner, Art Unit 2153